GEOG 151: GEOGRAPHY 151: PROGRAMMING FOR GIS II

In Workflow

1. GEOG Chair (tsk@csus.edu)
2. NSM College Committee Chair (tsk@csus.edu)
3. NSM Dean (datwyler@csus.edu)
4. Academic Services (torsetj@csus.edu;%20212408496@csus.edu;%20cnewsome@skymail.csus.edu)
5. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
6. Dean of Undergraduate (james.german@csus.edu;%20celena.showers@csus.edu)
7. Dean of Graduate (cnewsome@skymail.csus.edu)
8. Catalog Editor (212408496@csus.edu;%20torsetj@csus.edu;%20cnewsome@skymail.csus.edu)
9. Registrar's Office (wwd22@csus.edu;%20wlindsey@csus.edu;%20sac19595@csus.edu;%20danielle.ambrose@csus.edu; %20h.skocilich@csus.edu;%20205109584@csus.edu)
10. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Thu, 19 Sep 2019 22:54:19 GMT
   Thomas Krabacher (tsk): Approved for GEOG Chair
2. Mon, 07 Oct 2019 16:23:58 GMT
   Thomas Krabacher (tsk): Rollback to GEOG Chair for NSM College Committee Chair
3. Mon, 07 Oct 2019 17:07:58 GMT
   Thomas Krabacher (tsk): Approved for GEOG Chair
4. Mon, 21 Oct 2019 22:23:18 GMT
   Thomas Krabacher (tsk): Approved for NSM College Committee Chair
5. Wed, 23 Oct 2019 18:00:53 GMT
   Shannon Datwyler (datwyler): Approved for NSM Dean

New Course Proposal

Date Submitted:Tue, 17 Sep 2019 19:36:33 GMT

Viewing:GEOG 151 : Geography 151: Programming for GIS II

Last edit:Mon, 07 Oct 2019 17:07:29 GMT

Changes proposed by: Thomas Krabacher (101016405)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Thomas Krabacher	krabacherts@csus.edu	916-278-6338

Catalog Title:
Geography 151: Programming for GIS II

Class Schedule Title:
Programming for GIS II

Academic Group: (College)
NSM - Natural Sciences & Mathematics

Academic Organization: (Department)
Geography

Will this course be offered through the College of Continuing Education (CCE)?
No

Catalog Year Effective:
Spring 2020 (2020/2021 Catalog)

Subject Area: (prefix)
GEOG - Geography

Catalog Number: (course number)
151

Course ID: (For administrative use only.)
TBD

Units:
3

In what term(s) will this course typically be offered?
Fall, Spring

Does this course require a room for its final exam?
Yes, final exam requires a room

Does this course replace an existing experimental course?
No

This course complies with the credit hour policy:
Yes

Justification for course proposal:
A continuation of instruction from Programming for GIS (GEOG 150) focusing on advanced techniques in programming for raster/vector data processing and GIS automation

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)
This is an advanced course in programming and scripting for intermediate to advanced GIS users, using an object-oriented programming approach. You will develop well-documented and structured geoprocessing programs for data management, processing, and automation in the Python programming language, leveraging libraries such as ArcPy and GDAL.

Are one or more field trips required with this course?
No

Fee Course?
No

Is this course designated as Service Learning?
No

Does this course require safety training?
No

Does this course require personal protective equipment (PPE)?
No

Does this course have prerequisites?
Yes

Prerequisite:
GEOG 150 or instructor approval

Prerequisites Enforced at Registration?
Yes

Does this course have corequisites?
No

Graded:
Letter

Approval required for enrollment?
No Approval Required

Course Component(s) and Classification(s):
Laboratory
Lecture

Laboratory Classification

CS#16 - Science Laboratory (K-factor=2 WTU per unit)

Laboratory Units

2

Lecture Classification

CS#02 - Lecture/Discussion (K-factor=1WTU per unit)

Lecture Units

1

Is this a paired course?

No

Is this course crosslisted?

No

Can this course be repeated for credit?

No

Can the course be taken for credit more than once during the same term?

No

Description of the Expected Learning Outcomes: Describe outcomes using the following format: "Students will be able to: 1), 2), etc."

1) Develop and write clearly structured and documented Python programs
2) Create platform-agnostic geoprocessing and/or data manipulation automation tools
3) Create custom toolboxes for ArcGIS using Python and ArcPy
4) Develop written project proposal/storyboard and follow basic Agile development

Attach a list of the required/recommended course readings and activities:

Syllabus_GEOG151_Proposal.docx

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above.

- Quizzes (25%) -- Learning Outcomes 1,2
- Laboratory assignments (50%) -- Learning Outcomes 1,2,3
- Independent final project (25%) -- Learning Outcomes 1,2,3,4

For whom is this course being developed?

Majors in the Dept
Minors in the Dept
Majors of other Depts

Is this course required in a degree program (major, minor, graduate degree, certificate?)

No

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?

No

Will there be any departments affected by this proposed course?

No

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Undergraduate Learning Goals:

Competence in the disciplines
Integrative learning
Intellectual and practical skills

Is this course required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?
No

GE Course and GE Goal(s)

Is this a General Education (GE) course or is it being considered for GE?
No

Reviewer Comments:
Thomas Krabacher (tsk) (Mon, 07 Oct 2019 16:23:58 GMT): Rollback: Link assessment to learning outcomes

Key: 14132